

ABSTRACT OF THE DISCLOSURE

A communication system such as an OFDM or DMT system has nodes which are allowed to transmit continuously on one or just a few of the system's frequency sub-channels, while the other nodes avoid putting any signal into those sub-channels. Simple low data rate nodes are allowed to use a small number of sub-channels while more complicated nodes use the remainder, and preferably functionality is provided to ensure that adjacent sub-channels are reliably spaced apart in frequency so that they do not bleed over into one another; to ensure that signals from all nodes arrive at the base station with well-aligned symbol transitions; and to ensure that signals from the various nodes arrive at the base station with similar power levels.